

Remarks

Applicant has amended claim 9 and cancelled claims 11 and 12. Claims 24 – 29 are withdrawn. Applicant respectfully submits that no new matter was added by the amendment, as all of the amended matter was either previously illustrated or described in the drawings, written specification and/or claims of the present application. Entry of the amendment and favorable consideration thereof is earnestly requested.

The Examiner has rejected claim 6 under 35 U.S.C. §112, first and second paragraph, as failing to comply with the enablement requirement and as being indefinite. The Examiner has further rejected claims 1 – 9 under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 4,341,803 to Koshida et al. (“the '803 patent”). The Examiner has still further rejected claims 1 – 23 under 35 U.S.C. §103(a) as being unpatentable over U.S. Published Patent Application No. 2004/0166228 A1 to Loh et al. (“the '228 application”) in view of U.S. Patent No. 6,312,745 to Durance et al. (“the '745 patent”) and further in view of U.S. Patent No. 2,283,302 to Webb (“the '302 patent”). These rejections are respectfully traversed.

35 U.S.C. §112, First and Second Paragraph Rejections

Applicant respectfully submits that the term “separating agent” used in Claim 6 is described at various locations in the written specification. For example, the “separating agent” may in one advantageous embodiment comprise “wax”, or may in another advantageous embodiment comprise “Arabic gum or starch.” (p. 16, para. 50; p. 27, para. 83). As stated in the written specification, “[t]hese examples are not to be understood as being restrictive” but are provided as examples. (See, p. 27, para. 83). Therefore, Applicant respectfully submits that the separating agent is described in the specification.

With regard to the Examiner's second paragraph rejection, Applicant respectfully submits that the specification teaches that products may be "coated with a separating agent prior to being frozen or afterwards" and that the "coating effectively prevents a contamination and helps to preserve the structure of the product while being thawed and treated." (p. 5, para 13). Further regarding the function and operation of the separating agent, the specification teaches that "the coating can be chosen to contain agents that diffuse into the product to enhance quality, like sweetening or salting." (p. 5, para 13). Therefore, Applicant respectfully submits that the term "separating agent" should be interpreted as described in the written specification.

35 U.S.C. §102 (b) Rejections

The Examiner has stated that patentability of a product does not depend on its method of production and that if the product in the product-by-process claim is the same as or obvious from the product of the prior art, the claim is unpatentable even though the prior product was made by a different process. (Official Action p. 3 – 4). Applicant respectfully submits that the process disclosed and taught in the '803 patent cannot produce a product "the same as or obvious" as the process disclosed and taught in the present application as claimed in Claim 1.

For example, Claim 1 requires six distinct steps for treating the food product to produce a dried food product as summarized below:

- First step – (cleaned, peeled, seeded, shredded, and chopped into pieces)
- Second step – (frozen)
- Third step – (simultaneously thawed and predried)
- Fourth step – (dried with hot air)
- Fifth step – (microwave treatment)
- Sixth step – (broken, sieved, selected, and packed)

The dried food product resulting from the inventive process is different than the food product resulting from the process disclosed and taught in the '803 patent. The '803 patent discloses and teaches that "[t]he drying treatment is necessarily performed

in successive three stages, that is, freeze-drying, microwave irradiation under vacuum and vacuum-drying. The three drying stages should be in succession performed in the above-mentioned sequence and the elimination of one or two of the three drying stages will not produce dry fruit chips having excellent touch or pleasantness to the teeth to which the present invention is directed." (col. 4, lines 15 – 23). Therefore, the '803 patent teaches and discloses that the step of "freeze-drying" is a critical step to achieve a food product to which the invention of the '803 patent is directed. Conversely, the process of the present invention specifically rejects the step of freeze-drying. Rejection of the freeze-drying step results in a product that is markedly different than the product produced by the '803 patent method. Freeze-drying is undesirable because the process unacceptably alters the color of the final food product.

In addition, the '803 patent discloses and teaches that the "freeze-drying" is performed to reduce the moisture content in the starting fruit chips so as to maintain the original volume and the inherent taste of the fruit chips." (col. 4, lines 42 – 45). The '803 patent further discloses and teaches that "the freeze-drying reduces the moisture content in the fruit chips to a value in the range of 15 – 60% by weight" to "uniformly disperse the remaining moisture content which is present in the form of ice crystal throughout the fruit chips and dissolve the water-soluble sugar." (col. 4, lines 50 – 58). This is a vastly different process than that disclosed and taught in the present invention.

Therefore the product produced by the present inventive process is different from the product generated by the process disclosed and taught in the '803 patent in part at least, because the process of the present invention rejects the step of freeze-drying the food product, which cannot achieve the results described in the '803 patent.

Accordingly, because the '803 patent fails to disclose a product produced from the method including the steps of at least: freezing the food product, simultaneously thawing and predrying the food product, drying the food product with hot air and microwave heat treating the food product as required by Claim 1, the product

manufactured by the product disclosed in the '803 patent cannot anticipate the product claimed in Claim 1 of the present application.

35 U.S.C. §103 (a) Rejections

The Examiner has submitted that the '228 application teaches simultaneously thawing and predrying the food product with at least one of hot conditioned air, and a solution having an osmotic pressure higher than water in which the frozen food product is dipped. Applicant respectfully disagrees.

Rather, the '228 application teaches, "[a]pplication of the aqueous solution of the polyhydric alcohol prior to drying appears to allow sufficient migration of polyhydric alcohol into the cellular structure during drying, thereby effectively plasticizing the cellular structure of the fruits and vegetables. The resulting plasticized product is rendered non-brittle as indicated by a drastic reduction of lines and/or broken pieces." (para. 25). Therefore, rather than performing the simultaneous steps of thawing and predrying with at least one of hot conditioned air and a solution, the '228 application teaches use of a polyhydric alcohol. Alternatively, the method of the present invention does not avoid the breaking of cell membranes as taught in the '228 application but rather as taught in paragraph 10 states, "[d]ue to the simultaneous thawing and predrying according to the invention, liquid oozing through broken cell membranes can be evaporated or ousted at once. Therefore, product quality does not suffer from thawing, and a frozen product can be treated without the problems of pulpy states as mentioned above ever arising." (para. 10). Therefore, the method of the present invention utilizing a novel thawing and predrying step not taught or suggested in the '228 application. Applicant further respectfully submits that it would not be obvious nor is there any motivation to discard the primary teaching of the '228 application in favor of the method claimed in the present application.

Moreover, the method taught in the '228 application cannot be adapted to use microwave treatment of the food product as required by all the claims of the present invention. Rather, as discussed above, a primary objective of the '228 application is to avoid rupture of the cell membranes by reinforcing the cell structures with polyhydric alcohols. Conversely, use of microwave treatment is inapposite because it specifically causes destruction of the cell structures by puffing during microwave drying. Therefore, applicant respectfully submits that there is no motivation to discard these primary teachings of the '228 application according to the claims of the present invention. In addition, Applicant further respectfully submits that modification of the method taught in the '228 application is inappropriate because microwave treatment works directly against the primary objective of the '228 application.

Further, the product resulting from method taught in the '228 application cannot be the same as the product made from the method taught in Claim 1 of the present invention because a microwave treatment is not and cannot be utilized without destruction of the cell membranes.

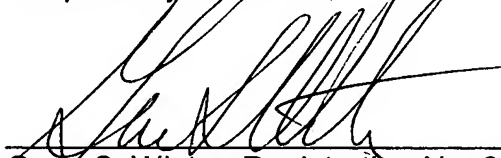
Even if one were to disregard the primary teachings of the '228 application and utilize microwave treatment, the result would be an undesirable product that has a pulpy consistency because the novel simultaneous step of thawing and predrying the food product according to the present invention is not used. Therefore, one would have to still further modify the '228 application according to the claimed invention to arrive at the claim product by process as per Claim 1.

Applicant further respectfully submits that neither the '745 patent nor the '302 patent teach disclose or suggest the step of simultaneously thawing and predrying the food product. Rather, the Examiner variously cited the '745 patent to teach hot air drying in a vacuum and the '302 patent to teach providing dehydrated food into particles. (Official Action, p. 5).

Applicant therefore respectfully submits that because neither the '228 application, the '745 patent nor the '302 patent teach disclose or suggest the step of simultaneously thawing and predrying the food product, nor can any of the cited references be properly modified to encompass the claimed process or product created by the claim process, then neither Claim 1 nor Claim 9 can be obvious in view of the these cited references.

It is respectfully submitted that claims 1 – 10 and 13 - 23, all of the claims remaining in the application, are in order for allowance and early notice to that effect is respectfully requested.

Respectfully submitted,



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